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VMWARE, INC. DARRYL SMITH 3401 Hillview Ave. PALO ALTO, CA 94304				
EXAMINER				
LIAO, JASON G				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/773,613

Applicant(s)

SCALES ET AL.

Examiner

JASON LIAO

Art Unit

2169

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 30-39 is/are pending in the application.
4a) Of the above claim(s) 15-29 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-14, 30-39 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-14, 30-39 are pending in this action, with claims 1, 5, 8, 11-13, 30, 31, 33, 37, 38 amended, and claims 15-29 are withdrawn.

Response to Arguments

2. Applicant's arguments filed 7/9/08 have been fully considered but they are not persuasive.

On Pages 9-10 of the included remarks, applicants attempt to distinguish the prior art from the instant application by stating that the "first computing entity" acquires a lock for itself, whereas Gurthridge has a client acquire a lock from a server node. In an apparent continuation of the argument, applicants state on Remarks Page 11 that the steps in Guthridge are performed by the server node, and not client node.

In response, the examiner notes that these two concepts are not mutually exclusive. A client can attempt to acquire a lock for itself, from a server that distributes said locks. In fact, this appears to be what Guthridge teaches (See Col 3 lines 9-36, overview describes a client requesting a lock from a server).

Without touching upon the validity of this characterization of the prior art, the examiner notes that the client/server model can be described as a divided system of computing labor which two processes combine to produce a result. One of these processes is passive (server) and one is active (client). However, the client/server model does not, in any

way, preclude both client and server present on the same physical computer system. As such, it would have been at least obvious to one skilled in the art that a “computing entity” of a computer system could contain both a client and server, in order to provide client-services to a human computer user who is using the system while providing services to other clients.

On Remarks Page 10, applicants state that there is no indication in Guthridge that the epoch number indicates when a lease expires.

See Col 9 lines 6-29, and compare with the use of the epoch number in Col 3 lines 62-67. The committed epoch number, in combination with the grace period, defines the maximum period available for locking.

On Remarks Page 11-13, applicants state that claims 9, 30 contain further steps that are specifically performed by server and/or client nodes.

The examiner reiterates that a hardware “computing entity” of a computer system could contain both a server and client application, as discussed in the response to applicants Remarks pages 9-10.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-3, 5-7, 9, 11-12, 14, 30-35 and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guthridge et al. (US 7,124,131 B2), granted October 17, 2006, filed April 29, 2003, hereinafter Guthridge, in view of Taylor (US 7,107,267 B2) Method, System, Program, and Data Structure for Implementing a Locking Mechanism for a Shared Resource, granted September 12, 2006, filed January 31, 2002, hereinafter Taylor.

In regard to claim 1, Guthridge discloses **a method for attempting to access a first data entity in a file system** as a method for reasserting a lock in a distributed file system (column 2, lines 1-2), the method being performed by a first computing entity, the file system also including one or more additional data entities that are concurrently accessible to at least one other computing entity, the file system including an owner field that can be used to determine whether the first data entity is leased by a computing entity and a time field that can be used to determine whether a lease for the first data entity has expired, the method comprising:

the first computing entity attempting to obtain a lease for itself on the first data entity by performing the reading the owner field as a query is conducted to determine if a lock manager data structure exists (Guthridge, column 4, lines 29-31, Fig. 3A, element 70) and:

if the owner field indicates that the first data entity is not currently leased, the first computing entity writing to the owner field to indicate an assumption of a lease of the first data entity as if the lock data structure does not exist, a new lock manager data structure for the identified object is created (Guthridge, column 4, lines 33-35, Fig. 3A, element 76), client node identifier associated with the lease (Guthridge, column 6, lines 57-58), and **writing to the time field to indicate when the lease expires** as return file system epoch number of the lock (Guthridge, column 4, lines 58-59); or

if the owner field indicates that the first data entity has been leased, the first computing entity reading the time field as a response to query indicating a current lease, return epoch number of the lock (Guthridge, column 4, line 58-59, Fig. 3A, element 82) and:

if the time field indicates that the lease has expired, the first computing entity writing to the owner field to break the existing lease as if a client node requests a lock with an expired lease, requesting client node may recover the lock lease (Guthridge, column 4, lines 26-29), expired lease is deleted (Guthridge, column 5, line 32-33) and **to indicate an assumption of a new lease** as flag is set (Guthridge, column 5, lines 31-32, Fig. 3B, element 96) and the **first computing entity writing to the time field to indicate when the new lease expires** as locks have a lease for a limited time period (Guthridge, Abstract, lines 2-3), hold lock for a set lease period (Guthridge, column 8, lines 23-24); or

if the time field indicates that the lease is still active, concluding that the first data entity is currently unavailable as if there is a conflict, the lock request is denied (Guthridge, column 6, lines 66-67); and

if a lease is obtained, the first computing entity accessing the first data entity while the lease is in effect as once the client node holds a distributed lock the client node can access the data (Guthridge, column 1, lines 30-32), however Guthridge does not specifically disclose reading and writing to a time field.

On the other hand, Taylor discloses a lease data structure with a lease start time (Taylor, column 5, line 46, Fig. 3, element 104), lease length (Taylor, column 5, lines 45-46, Fig. 3, element 106) and determining that the lease time has expired (Taylor, column 2, line 34).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the teaching of Guthridge to include the lease time of Taylor for **reading the time field**, determining **if the time field indicates that the lease is still active** and **writing to the time field** because a granted access would cease when the lease expired (Taylor, column 5, lines 44-45). It is also noted that both Guthridge and Taylor are from file management, and more specifically access management (Guthridge, Abstract: lines 1-2, locks in a distributed file system, Taylor, Abstract: line 2-3, locking mechanism to control access to a shared resource).

In regard to claim 2, Guthridge discloses the method wherein the **first data entity is a file** as client can access the data for the file (column 1, lines 31-32).

In regard to claim 3, Guthridge discloses the method of wherein the **first data entity includes metadata** as metadata information for the requested file (column 1, line 26) and **the owner field is located in this metadata** as attributes of a file, such as owner, group, mode, etc. maintained in client node data cache (column 7, lines 17-18).

In regard to claim 5, Guthridge discloses the method of claim 1, wherein the step of the **first computing entity writing to the owner field to indicate an assumption of a lease of the first data entity comprises the first computing entity writing a data value to the owner field that uniquely identifies the first computing entity** as a unique client node identifier is assigned to the client node when the lease is established (Guthridge, column 3, lines 19-21).

In regard to claim 6, Guthridge discloses the method wherein the **data value that uniquely identifies the first computing entity is determined autonomously by the first computing entity** as manager adapted to control a lock version number (Guthridge, column 2, lines 16-18).

In regard to claim 7, Guthridge discloses the method wherein **the owner field indicates that the first data entity is not currently leased when the owner field contains a value of zero** as lock is downgraded to 'None' indicating the lock should be released completely (Guthridge, column 7, line 44-45).

In regard to claim 9, Guthridge discloses the method **wherein the first computing entity determines whether a prior lease has expired by reading a first value from the time field** as determine if the client requesting the lock already holds a lock (Guthridge, column 4, lines 48-49), query will return epoch number (Guthridge, column 4, lines 56-59), **delaying for a predetermined lease period** as new lock requests are denied during a lock reassertion grace period (Guthridge, column 4, lines 19-20) **and reading a second value from the time field** as current epoch number of file system is read (Guthridge, column 6, line 18, Fig. 4A, element 144), **wherein the first computing entity determines that the prior lease has expired if the second value is the same as the first value** as determine if epoch number of file system is equivalent to epoch number provided by client node (Guthridge, column 6, lines 26-28, Fig. 4A, element 150), **and the first computing entity determines that the prior lease has not expired if the second value is different from the first value** as negative response will result in denial of lock assertion (Guthridge, column 6, lines 31-32).

In regard to claim 11, Guthridge discloses the method wherein, **if the first computing entity concludes that the first data entity is currently unavailable** as if the lease has not expired (Guthridge, column 5, line 29, lines 33-34), **the first computing entity further writes an entry to queue owner field in a list to indicate an interest in accessing the first data entity** as the client node requesting the list is added to a list (Guthridge, column 5, line 35), however Guthridge does not specifically disclose **a queue**. On the other hand, Taylor discloses a resource queue (Taylor, column 4, line 31, Fig. 3, element 50).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the teaching of Guthridge to include the resource queue of Taylor for **the first computing entity further writes an entry to queue owner field in a queue to indicate an interest in accessing the first data entity** because a resource queue provides a list of I/O requests with respect to a shared resource (Taylor, column 4, lines 34-37).

In regard to claim 12, Guthridge does not specifically disclose the method **wherein first the computing entity also writes to a queue time field to indicate a period of time for which the entry to the queue owner field is valid**. On the other hand, Taylor discloses a lease length (column 5, line 57, Fig. 3, element 118).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the teaching of Guthridge to include the lease length of Taylor for **writes to a queue time field to indicate a period of time for which the entry to the queue owner field is valid** because if a process granted access would cease access operations when the lease expires (Taylor, column 5, lines 44-45).

In regard to claim 14, Guthridge discloses the method wherein, **if a lease is obtained, the first computing entity also sets a renewal timer** as locks have a lease for a limited time period (Guthridge, Abstract, lines 2-3) **and, after the renewal timer expires, the first computing entity renews the lease by writing a new value to the time field** as client node may reassert a lock for a lease that has expired (Guthridge, column 6, lines 13-14, Fig. 4A, element 158).

In regard to claim 30, Guthridge discloses **a method for attempting to access a first data entity in a file system** as a method for reasserting a lock in a distributed file system (Guthridge, column 2, lines 1-2), the method being performed by a first computing entity, the file system also including one or more additional data entities that are concurrently accessible to at least one other computing entity, the file system including an owner field that can be used to determine whether the first data entity is in use by a computing entity, the method comprising:

the first computing entity reading the owner field and determining whether the first data entity is in use by a computing entity as a query is conducted to determine if a lock manager data structure exists (column 4, lines 29-31, Fig. 3A, element 70);

if the first data entity is not in use by a computing entity, the first computing entity writing to the owner field to take control of a lock on the first data entity as if the lock data structure does not exist, a new lock manager data structure for the identified object is created (column 4, lines 33-35, Fig. 3A, element 76), client node identifier associated with the lease (column 6, lines 57-58); and

if control of the lock is obtained, the first computing entity accessing the first data entity as

once the client node holds a distributed lock the client node can access the data (column 1, lines 30-32); or

if control of the lock is not obtained as if the lease has not expired (Guthridge, column 5, line 29, lines 33-34), **the first computing entity writing an entry to a *list* owner field to indicate an interest in accessing the first data entity and waiting for an opportunity to access the first data entity** as the client node requesting the list is added to a list (Guthridge, column 5, line 35), however Guthridge does not specifically disclose a **queue**. On the other hand, Taylor discloses a resource queue (Taylor, column 4, line 31, Fig. 3, element 50).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the teaching of Guthridge to include the resource queue of Taylor for **writing an entry to a queue owner field to indicate an interest in accessing the first data entity and waiting for an opportunity to access the first data entity** because a resource queue provides a list of I/O requests with respect to a shared resource (Taylor, column 4, lines 34-37).

In regard to 31, Guthridge discloses the method further comprising, **if the first data entity is in use by a computing entity, the first computing entity reading a time field to determine whether a lease on the data entity has expired** as a response to query indicating a current lease, return epoch number of the lock (Guthridge, column 4, line 58-59, Fig. 3A, element 82) and, **if the lease has expired, the first computing entity writing to the owner field to break the existing lease** as if a client node requests a lock with an expired lease, requesting client node may recover the lock lease (Guthridge, column 4, lines 26-29), expired lease is deleted

(Guthridge, column 5, line 32-33) **and to indicate an assumption of a new lease of the first data entity** as flag is set (Guthridge, column 5, lines 31-32, Fig. 3B, element 96).

In regard to claim 32, Guthridge discloses the method **wherein the first computing entity determines whether the lease has expired by reading a first value from the time field** as determine if the client requesting the lock already holds a lock (Guthridge, column 4, lines 48-49), query will return epoch number (Guthridge, column 4, lines 56-59), **delaying for a predetermined lease period** as new lock requests are denied during a lock reassertion grace period (Guthridge, column 4, lines 19-20) **and reading a second value from the time field** as current epoch number of file system is read (Guthridge, column 6, line 18, Fig. 4A, element 144), **wherein the first computing entity determines that the lease has expired if the second value is the same as the first value** as determine if epoch number of file system is equivalent to epoch number provided by client node (Guthridge, column 6, lines 26-28, Fig. 4A, element 150), **and the first computing entity determines that the lease has not expired if the second value is different from the first value** as negative response will result in denial of lock assertion (Guthridge, column 6, lines 31-32).

In regard to claim 33, Guthridge discloses the method further comprising, if the first data entity is not in use by a computing entity, in addition to writing to the owner field to take control of the lock on the first data entity, **the first computing entity writing to a field to indicate when a lease of the first data entity expires** as locks have a lease for a limited time period (Guthridge, Abstract, lines 2-3), hold lock for a set lease period (Guthridge, column 8, lines 23-24).

However, Guthridge does not specifically disclose the **first computing entity writing to a time field**.

On the other hand, Taylor discloses setting a lease start time in a lease data structure (Taylor, column 2, lines 50-51, Fig. 3, element 104).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the teaching of Guthridge to include the start lease time of Taylor because a granted access would cease when the lease expired (Taylor, column 5, lines 44-45).

In regard to claim 34, Guthridge discloses the method **wherein the first data entity is a file** as client can access the data for the file (Guthridge, column 1, lines 31-32).

In regard to claim 35, Guthridge discloses the method wherein **the first data entity includes metadata** as metadata information for the requested file (Guthridge, column 1, line 26) **and the owner field is located in this metadata** attributes of a file, such as owner, group, mode, etc. maintained in client node data cache (Guthridge, column 7, lines 17-18).

In regard to claim 38, Guthridge discloses the method wherein **the first computing entity autonomously determines a data value that uniquely identifies the first computing entity** as manager adapted to control a lock version number (Guthridge, column 2, lines 16-18) **and the first computing entity assumes a lock on the first data entity by writing the unique data value into the owner field** as a unique client node identifier is assigned to the client node when the lease is established (Guthridge, column 3, lines 19-21).

In regard to claim 39, Guthridge and Taylor disclose the method further comprising, if control of the lock is not obtained, in addition to writing an entry to a queue owner field to indicate an interest in accessing the first data entity, however Guthridge does not specifically disclose **the first computing entity writing to a time field to indicate a period of time for which the entry to the queue owner field is valid**. On the other hand, Taylor discloses a lease length (Taylor, column 5, lines 46-47, Fig. 3, element 106).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to further modify the teaching of Guthridge to include the lease length of Taylor for **writes to a queue time field to indicate a period of time for which the entry to the queue owner field is valid** because if a process granted access would cease operations when the lease expires (Taylor, column 5, lines 44-45).

5. Claims 4, 10 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guthridge and Taylor as applied to claims 1 and 30 and further in view of Shaughnessy (US 5,692,178) System and Methods for Improved File Management in a Multi-User Environment, granted November 25, 1997, hereinafter Shaughnessy.

In regard to claim 4, Guthridge and Taylor disclose different locks, such as session, data and range locks (Guthridge, column 3, lines 46-47), however Guthridge and Taylor do not specifically disclose **wherein the first data entity is a directory**. On the other hand, Shaughnessy discloses a plurality of locks types including a directory lock, (Shaughnessy, column 3, line 48).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the teaching of Guthridge to include the directory lock of Shaughnessy where **the first data entity is a directory** because a plurality of lock types are included for maximizing concurrent access while minimizing corruption and data loss (Shaughnessy, column 3, line 50-51). It is also noted that Guthridge, Taylor and Shaughnessy are from file management, and more specifically access management (Guthridge, Abstract: lines 1-2, locks in a distributed file system, Taylor, Abstract: line 2-3, locking mechanism to control access to a shared resource, Shaughnessy, Abstract: line 7, controlling concurrent access).

In regard to claim 10, Guthridge and Taylor do not specifically disclose the method of **wherein the steps of reading the owner field and reading the time field are both performed in a single read operation**. On other hand, Shaughnessy discloses a lock file read in a single I/O operation (Shaughnessy, column 19, lines 15-16).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the teaching of Guthridge and Taylor to include the single I/O operation of Shaughnessy for **the steps of reading the owner field and reading the time field are both performed in a single read operation** because this avoids multiple reads, thus avoiding a performance penalty (Shaughnessy, column 19, lines 24-26).

In regard to claim 36, Guthridge and Taylor disclose different locks, such as session, data and range locks (Guthridge, column 3, lines 46-47), however Guthridge and Taylor do not specifically disclose the method **wherein the first data entity is a directory**. On the other hand,

Shaughnessy discloses a plurality of locks types including a directory lock, (Shaughnessy, column 3, line 48).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the teaching of Guthridge and Taylor to include the directory lock of Shaughnessy where **the first data entity is a directory** because a plurality of lock types are included for maximizing concurrent access while minimizing corruption and data loss (Shaughnessy, column 3, line 50-51).

6. Claims 8, 13 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guthridge and Taylor as applied to claims 1 and 30 and further in view of Stakutis et al. (US 6,658,417 B1) Term-Based Methods and Apparatus for Access to Files on Shared Storage Devices, granted December 2, 2003, hereinafter Stakutis.

In regard to claim 8, Guthridge and Taylor disclose the method **wherein the first computing entity a lease expires a predetermined period of time after the lease begins** as locks have a lease for a limited time period (Guthridge, Abstract, lines 2-3), and however Guthridge does not specifically disclose **wherein the step of writing to the time field to indicate when the lease expires comprises the first computing entity writing a current time value to the time field;** although Guthridge does a lease for a limited time period (Guthridge, Abstract, lines 2-3). On the other hand, Stakutis discloses a lease duration referenced to the time of the request (Stakutis, column 10, lines 9-10).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the teaching of Guthridge to include the request time of Stakutis for **writing a current time value to the time field** because once a lease is granted, clients may let the lease expire rather than closing the session (Stakutis, column 10, lines 41-43). It is also noted that Guthridge, Taylor and Stakutis are from file management, and more specifically access management (Guthridge, Abstract: lines 1-2, locks in a distributed file system, Taylor, Abstract: line 2-3, locking mechanism to control access to a shared resource, Stakutis, Abstract: lines 15-16, access to file on the storage device by generating a "lease").

In regard to claim 13, Guthridge and Taylor do not specifically disclose the method further comprising **the first computing entity reserving a disk on which the owner field and the time field are located to ensure exclusive access to the disk for the reading and writing of the owner field and the time field**. On the other hand, Stakutis discloses dedicated storage devices.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the teaching of Guthridge and Taylor to include the dedicated storage devices of Stakutis for **reserving a disk on which the owner field and the time field are located to ensure exclusive access to the disk for the reading and writing of the owner field and the time field** because this allows the client nodes to access the file system without extraneous network communications (Stakutis, column 4, lines 27-29).

In regard to claim 37, Guthridge and Taylor do not specifically disclose the method further comprising **the first computing entity reserving a disk on which the owner field is located to**

ensure exclusive access to the disk for the reading and writing of the owner field. On the other hand, Stakutis discloses dedicated storage devices.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the teaching of Guthridge and Taylor to include the dedicated storage devices of Stakutis for **reserving a disk on which the owner field and the time field are located to ensure exclusive access to the disk for the reading and writing of the owner field and the time field** because this allows the client nodes to access the file system without extraneous network communications (Stakutis, column 4, lines 27-29).

Remarks

The present examiner notes that the previous examiner's rejection of claim 30 included Taylor to cover a "queue", even though a "list" is already present in Guthridge. The present examiner notes that the queue data structure is a linked list with pointers at the ends pointing to the other end, and would not have bothered to include the Taylor for the claim 30 rejection. If applicants wish to pursue prosecution, they may wish to help compact prosecution by arguing distinguishing characteristics of the claimed queue limitation that would overcome the Guthridge list as is.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON LIAO whose telephone number is (571)270-3775. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pierre Vital can be reached on 571-272-4215. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. T./
Examiner, Art Unit 2167

21 Sept 08

/Jason Liao/
Examiner, Art Unit 2169

/Pierre M. Vital/
Supervisory Patent Examiner, Art Unit 2169